



# CITY OF FALLS CHURCH

**DATE:** October 18, 2016

**TO:** Chairs Novotny and Thurston and Members of the Streetscape Taskforce

**FROM:** Carly Aubrey, AICP, Senior Planner

**SUBJECT:** Stormwater Management, Continuous Soil Trenches, and Streetscape

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## Stormwater Management

At the last Streetscape Taskforce meeting, the group discussed stormwater catchment within tree planters. The group agreed it did not want planters like those in front of the Northgate building. The group did not agree on whether less noticeable designs would be appropriate and left the draft document open for discussion. This memo includes examples from other locations that could be considered.

## Green Streets of Portland, Oregon



Excess runoff from the lowest planter enters the storm drain system.



The Southwest 12th Avenue planters include a strip of pavers for parked vehicle access.





The planters and vegetation fit nicely into the urban streetscape.



Each street-side planter inlet includes a small hump in the asphalt to direct water into the planter.

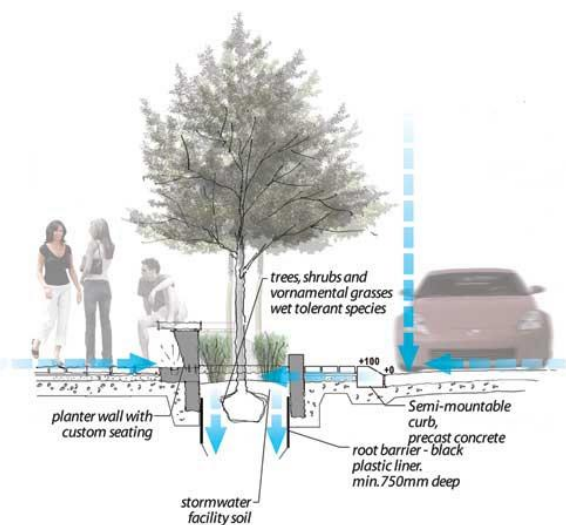
<https://landperspectives.com/tag/stormwater/>

## Kitchener's Flexible, Pedestrian-First Streetscape

### Pedestrians First

There was no question for the need for downtown parking, but it was equally important for a positive, safe and generous pedestrian environment. "Pedestrian first" means creating walkable spaces with safe seating areas that make the downtown experience a more pleasurable one. The flexible parking solution now provides parking in the winter and pedestrian plazas and patios in the summer, an ideal solution for business and the community.

<http://www.landscapeonline.com/research/article.php/13721>





## San Francisco Better Streets Guide

[http://www.sf-planning.org/ftp/BetterStreets/docs/Draft\\_BSP\\_6\\_Streetscape%20Elements.pdf](http://www.sf-planning.org/ftp/BetterStreets/docs/Draft_BSP_6_Streetscape%20Elements.pdf)



*The Low Impact Design approach to stormwater management creates opportunities for unique and attractive streetscape design*

- ▼ *Stormwater management can be a component of many other strategies elaborated in this plan, including remediating pork chop triangles (source: Kevin Perry)*



# The “Stormwater Spine”

SW Montgomery Green Street  
Connecting the West Hills to the Willamette River



## 1 Stormwater Bridges

Multiple pedestrian bridges across the stormwater spine are needed to provide adequate pedestrian flow throughout the corridor. These bridges should be wide enough and spaced frequently to accommodate specific users such as bikes, people, and even autos.

## 2 “Curbless” Street Profile

Providing a flush drainage condition along the stormwater spine allows stormwater runoff to sheet flow into the landscape area. This provides both a barrier free condition for pedestrians and a shallower and more aesthetic stormwater facility.

## 3 High-Density Planting

The stormwater spine is a functional landscape area used to clean and absorb stormwater runoff. Providing a high-density spacing of trees, shrubs, and groundcovers maximizes the ability for plant roots to clean pollutants and absorb runoff.

## 4 Simple and Shallow

There is a maximum grade change of 6-inches from the walking surface to the finish grade of the stormwater spine. This simple design approach eliminates the typical need for a perimeter curb around the landscape and still allows for adequate pedestrian safety.

## 5 A Continuous Theme

The stormwater spine functionally and visually links individual blocks within the street corridor. Planting types and the width of the spine does vary from block-to-block in response to unique conditions. However, the overall “green thread” remains consistent throughout.



The continuous Stormwater Spine along the SW Montgomery Green Street is planned as a highly functional landscape system used to capture and manage stormwater runoff from over 75,000 square feet of impervious area. The spine is the project site’s “workhorse” for stormwater management. Each block along the corridor has the stormwater spine traversing through it, however, the form and size of the landscape system does vary in response to the unique conditions of each block. Sections of the stormwater spine have already been built along the SW Montgomery Green Street and are so well integrated into the urban fabric that many can not even distinguish them as being functional stormwater landscapes.

<https://www.asla.org/2012awards/572.html>



Portland, Oregon



## Continuous Soil Trenches

Also at the September 13, 2016 meeting, the group discussed ways to expand tree soil volume while leaving more space open to pedestrian travel. The City Arborist presented ideas for cantilevered concrete and pavers. With this approach the soil bed could run nearly continuously while providing more hardscaped areas on the surface for pedestrian travel and other amenities. Below are some examples of continuous soil trenches.

